

Interactive comment on “Variability of rainfall in Peninsular Malaysia” by C. L. Wong et al.

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Received and published: 8 January 2010

We thank reviewer 1 (P. Laux) for critical assessment of the manuscript, raising valuable issues and suggestions to improve the treatment. We agree that the implications of the study for contributing to water resources management practice need to be worked out further, particularly with reference to the EPU (1999) master plan.

The selection of the three regions is admittedly arbitrarily following from inspection of the long-term mean monthly rainfall distributions shown in Figure 3. The marked differences between the coastal zones clearly stand out, while the central inland part appears to exhibit a mixed or transitional seasonal pattern of mean monthly rainfall sums. The central mountain range, as depicted in Figure 3, then forms a natural boundary to delineate the west coast and the inland region. The east coast region is limited to

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a relatively narrow coastal zone. We do not think that the boundaries between these regions are sharp. On the other hand, the areal extents of the regions were limited to avoid losing distinction due to large spatial integration.

The suggestion to investigate ENSO in relation to rainfall at monthly and seasonal time scales is much appreciated. From earlier analysis we already noted that 1-2 monthly rainfall series showed some correlation with the Southern Oscillation Index, while other indices did not provide conclusive results. We also appreciate the suggestion to focus further analysis on changes in the temporal monsoon characteristics during the period covered by the data.

The suggestion to study the relationship between trend in rainfall amount and rainfall rate and/or number of rainy days could probably better be addressed in a station-based analysis. Due to the highly convective nature of the rainfall, some spatial cross-station interference inevitably takes place during interpolation. Some criterion would then be needed as to what constitutes a rainy or a non-rainy day. However, the point is well-taken. As of yet, we have not examined if an objective circulation pattern classification as applied by Bárdossy et al. (2002) and Beck et al. (2007) to European conditions could be applied to equatorial situations to further analyze existence of the relationship.

References:

Bárdossy, A., Stehlík, J., and Caspary, H.-J.: Automated objective classification of daily circulation patterns for rainfall and temperature downscaling based on optimised fuzzy rules, *Clim. Res.*, 23, 11-22, 2002.

Beck, C., Jacobeit, J., and Jones, P. D.: Frequency and within-type variations of large-scale circulation types and their effects on low frequency climate variability in central Europe since 1780, *Int. J. Climato.*, 4, 473-491, 2007.

EPU: Masterplan for the Development of Water Resources in Peninsular Malaysia 2000-2050, Economic Planning Unit, Prime Minister's Department (1999). Kuala

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Lumpur., 1999.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 5471, 2009.

HESD

6, C3056–C3058, 2010

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